EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	10	"5698740"	USPAT	OR	ON	2006/11/01 13:06
L2	11	"5386002"	USPAT	OR	ON	2006/11/01 13:08
L3	2	"5470987"	USPAT	OR	ON	2006/11/01 13:08
L4	36920	NISHIYAMA.in. TENMA.in. EGUCHI.in.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2006/11/01 13:10
L5	21	L4 and arylamine	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2006/11/01 13:10
L9	2	"20020132134"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	ADJ	ON	2006/11/01 13:58
L10	905	546/400 564/305 564/315 564/322 564/326	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2006/11/01 13:59
L11	1	l4 and l10	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2006/11/01 14:00
L12	63	l10 and arylamine	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2006/11/01 14:00
L13	51	l10 and fluorene	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2006/11/01 14:00
L14	9	l13 and l12	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2006/11/01 14:06

EAST Search History

L15	1	electrolumivesc$	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2006/11/01 14:06

STIK

=> b reg
FILE 'REGISTRY' ENTERED AT 12:19:22 ON 01 NOV 2006
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES: 31 OCT 2006 HIGHEST RN 911785-87-0
DICTIONARY FILE UPDATES: 31 OCT 2006 HIGHEST RN 911785-87-0

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TSCA INFORMATION NOW CURRENT THROUGH June 30, 2006

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REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document. For information
on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

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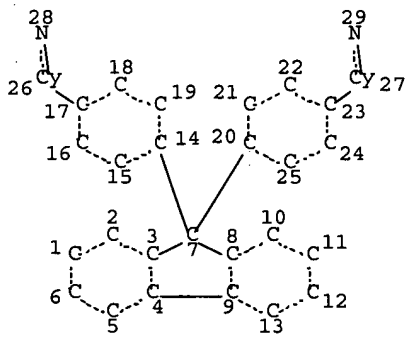
L11 STR



NODE ATTRIBUTES:
NSPEC IS RC AT 28
NSPEC IS RC AT 29
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 29

STEREO ATTRIBUTES: NONE
L13 20 SEA FILE=REGISTRY SSS FUL L11

100.0% PROCESSED 7912 ITERATIONS 20 ANSWERS
SEARCH TIME: 00.00.01

=> b hcap
FILE 'HCAPLUS' ENTERED AT 12:19:35 ON 01 NOV 2006
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

FILE COVERS 1907 - 1 Nov 2006 VOL 145 ISS 19
FILE LAST UPDATED: 31 Oct 2006 (20061031/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

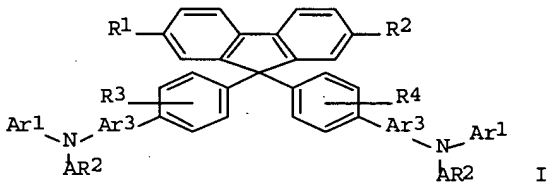
This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d bib abs hitrn fhitstr retable l16 tot

L16 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:541842 HCAPLUS Full-text
DN 143:59687
TI Preparation of high-purity arylamines having fluorenyl groups
IN Nishiyama, Shoichi; Matsumoto, Naoki; **Eguchi, Hisao**
PA **Tosoh** Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 17 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP2005162660	A2	20050623	2003JP-0403050	20031202
PRAI 2003JP-0403050		20031202		

OS MARPAT 143:59687
GI



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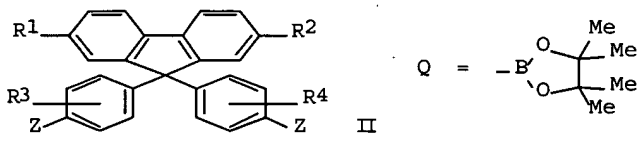


II

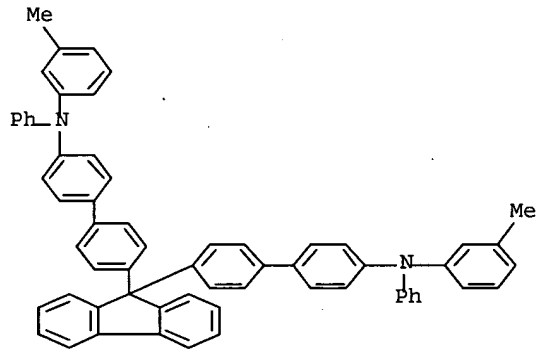
AB The arylamines I [R1-R4 = H, (cyclo)alkyl, alkoxy, etc.; Ar1, Ar2 = aryl, heterocyclyl; Ar1Ar2 may form ring; Ar3 = arylene], useful for electrophotog. and organic electroluminescent materials (no data), are prepared by treatment of fluorenes II (R1-

R4 = same as I; Z = halo, OSO2CF3) with MAr3NAr1Ar2 [M = B(OR5)2, MgX, ZnX, SnR63, Q; R5, R6 = H, C1-6 alkyl; X = halo; Ar1-Ar3 = same as I] and bases in the presence of catalysts. Thus, II (R1 = R2 = R3 = R4 = H, Z = OSO2CF3) was treated with 4-(3-methyldiphenylamino)phenylboronic acid and Na2CO3 in the presence of Pd(PPh3)4 in xylene, washed with water, condensed, subjected to a silica gel column chromatog., and recrystd. to give 84% I (R1 = R2 = R3 = R4 = H, Ar1 = 4-MeC6H4, Ar2 = Ph, R3 = 1,4-phenylene) with purity 99.7%.

IT **675201-92-0P 675201-93-1P 849820-54-8P 854736-52-0P**
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(preparation of arylamines having fluorenyl groups for electrophotog. and organic electroluminescent materials by coupling of fluorenes with arylamines)

IT **675201-92-0P**
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(preparation of arylamines having fluorenyl groups for electrophotog. and organic electroluminescent materials by coupling of fluorenes with arylamines)

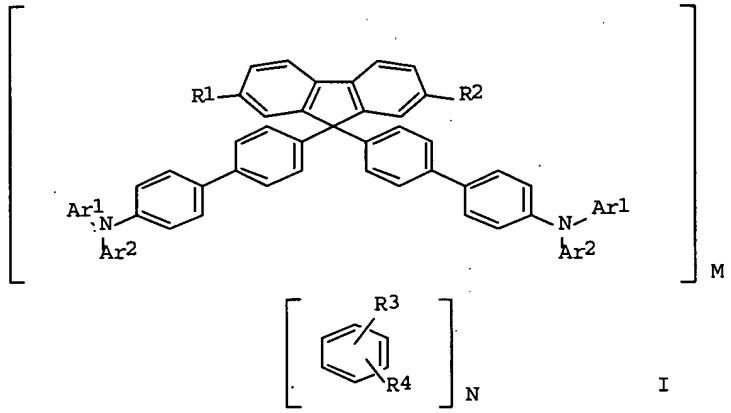
RN 675201-92-0 HCAPLUS
CN [1,1'-Biphenyl]-4-amine, 4',4'''-(9H-fluoren-9-ylidene)bis[N-(3-methylphenyl)-N-phenyl- (9CI) (CA INDEX NAME)



L16 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:447233 HCAPLUS Full-text
DN 142:481842
TI Preparation of inclusion compounds from arylamines and aromatic hydrocarbons and isolation of arylamines from them
IN **Tenma, Hiroaki**; Nishiyama, Shoichi; **Eguchi, Hisao**
PA **Tosoh** Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP2005132732	A2	20050526	2003JP-0367237	20031028
PRAI	2003JP-0367237		20031028		

OS MARPAT 142:481842
GI



I

AB The inclusion compds. I [R1, R2 = H, (cyclo)alkyl, alkoxy, aryl, aryloxy, halo, amino; Ar1, Ar2 = Ph, biphenyl, p-tolyl; M/N = 0.3-2; R3, R4 = H, C1-5 alkyl]. Arylamines are separated from I by removing guest compds. by heating. A mixture of 1 g crude crystals of 9,9-bis[4-(diphenylamino)-1,1'- biphenyl]fluorene (II; 98.2% purity) and 5 g toluene was heated at 100° for 20 min, crystallized at room temperature overnight, and dried to give 0.88 g prismatic crystals of 1:1 inclusion compound, which were heated at 150-160° under 20-650 Pa for 1 h to give 84% glassy II with 99.7% purity.

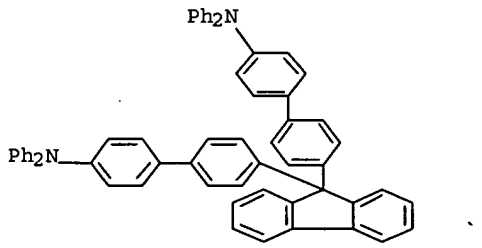
IT **675201-93-1P 852203-55-5P**
RL: PUR (Purification or recovery); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of inclusion compds. from arylamines and aromatic hydrocarbons and isolation of arylamines from them)

IT **852203-56-6P 852203-57-7P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of inclusion compds. from arylamines and aromatic hydrocarbons and isolation of arylamines from them)

IT **675201-93-1P**
RL: PUR (Purification or recovery); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of inclusion compds. from arylamines and aromatic hydrocarbons and isolation of arylamines from them)

RN 675201-93-1 HCAPLUS

CN [1,1'-Biphenyl]-4-amine, 4',4'''-(9H-fluoren-9-ylidene)bis[N,N-diphenyl- (9CI) (CA INDEX NAME)



L16 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:247028 HCAPLUS Full-text

DN 140:294490

TI Blue fluorescent 9,9-bis[(4-amino)-1,1'-biphenyl]fluorene derivatives for use in organic electroluminescent devices

IN **Nishiyama, Masakazu; Tenma, Hiroaki; Eguchi, Hisao**

PA **Tosoh** Corporation, Japan
SO Eur. Pat. Appl., 42 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP---1400578	A1	20040324	2003EP-0021402	20030922 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	JP2004315495	A2	20041111	2003JP-0199203	20030718 <--
	KR2004025826	A	20040326	2003KR-0064372	20030917 <--
	US2004110958	A1	20040610	2003US-0663683	20030917 <--
PRAI	2002JP-0274983	A	20020920 <--		
	2003JP-0004818	A	20030110 <--		
	2003JP-0054070	A	20030228 <--		
	2003JP-0199203	A	20030718 <--		

OS MARPAT 140:294490
GI

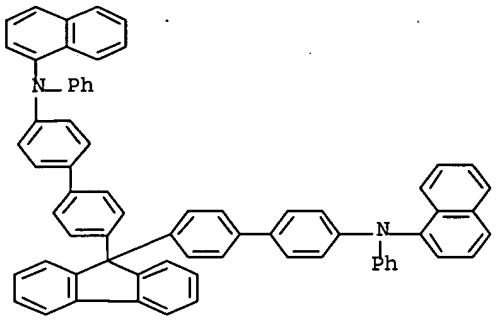
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Synthesis of arylamine derivs. that can be utilized as luminescent, hole-transporting or hole-injecting materials for organic electroluminescent devices are described, where the arylamine derivs. are represented by the general formula (I), where R1-4 each independently represents a hydrogen atom, an alkyl group, an alkoxy group, an aryl group, an aryloxy group, a halogen atom, an amino group, etc.; Ar1 and Ar2 each independently represents a substituted or unsubstituted aryl group or hetero-aromatic group, and Ar1 and Ar2 may form a N-containing heterocyclic ring together with the N atom to which Ar1 and Ar2 bond; and Ar3 represents a substituted or unsubstituted arylene group. Di(haloaryl)fluorene derivs. represented by the general formula (II), where R1-4 and Ar3 each represents the same substituent as defined previously; and X1 and X2 each represents a Cl atom, a Br atom, or an I atom are also discussed. The synthesis and properties of blue fluorescent 9,9-bis[(4-amino)-1,1'-biphenyl]fluorene derivs. were discussed.

IT **675201-90-8P 675201-92-0P 675201-93-1P**
675201-95-3P 675201-97-5P 675201-99-7P
675202-01-4P 675202-03-6P
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(synthesis of blue fluorescent 9,9-bis[(4-amino)-1,1'-biphenyl]fluorene derivs. for use in organic electroluminescent devices)

IT **675201-90-8P**
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(synthesis of blue fluorescent 9,9-bis[(4-amino)-1,1'-biphenyl]fluorene derivs. for use in organic electroluminescent devices)

RN 675201-90-8 HCAPLUS
CN 1-Naphthalenamine, N,N'-[9H-fluoren-9-ylidenebis([1,1'-biphenyl]-4',4-diyl)]bis[N-phenyl- (9CI) (CA INDEX NAME)



RETABLE

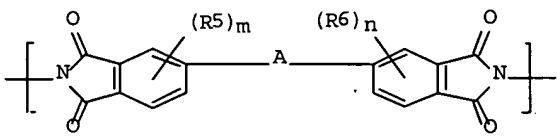
Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Aziz, H	2002			US2002132134 A1	
Ishida, T	2003			JP2003261472 A	HCAPLUS
Ogawa, T	1997			US---5698740 A	HCAPLUS

=> d bib abs hitstr retable l19 tot

L19 ANSWER 1 OF 6 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:1175030 HCAPLUS Full-text
DN 143:449484
TI Optical films with good heat resistance and optical properties and displays therewith
IN Aiki, Yasuhiro; Ishizuka, Takahiro; Sakurai, Seiya
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 26 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP2005306983	A2	20051104	2004JP-0125148	20040421
PRAI 2004JP-0125148		20040421		

GI



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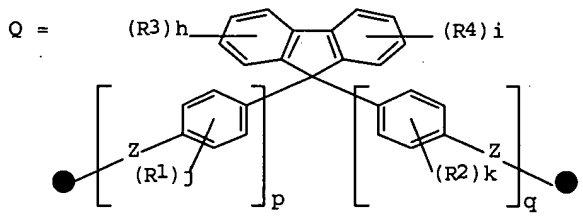


AB The optical films, useful for flat panel displays such as LCD or EL displays, comprise polyimides having (plural kinds of) repeating units I [X = divalent group containing monocyclic or condensed polycyclic hydrocarbon or heterocyclic groups; A = Q; m, n = 0-3; R1-R6 = halo, alkyl(oxy), aryl; Z = CO2, OCO, CONH, NHCO, NHCO2, OCONH, NHCONH, OCO2, O, S, SO2, CO, C(CF3)2, CH2, CHR7, CR7R8, OCH2CH2O, CH2CHR7O, CHR7CH2O, arylene, cycloalkylene; R7, R8 = halo, alkyl, aryl; h, i, j, k = 0-4; p, q = 0, 1]. The films may have gas-barrier layers and/or transparent conductive layers at least on one side.

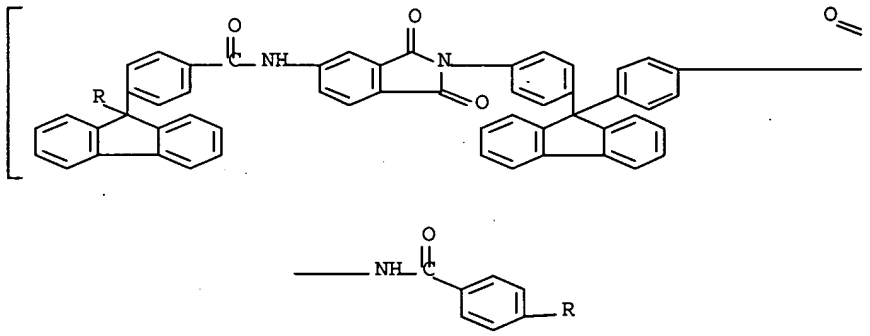
IT **868603-87-6P**

RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(cardo polyimide-based optical films with good heat resistance and optical properties for flat panel displays)

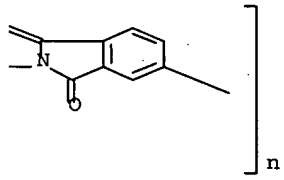
RN 868603-87-6 HCAPLUS

CN Poly[(1,3-dihydro-1,3-dioxo-1H-isoindole-5,2-diyl)-1,4-phenylene-9H-fluoren-9-ylidene-1,4-phenylene(1,3-dihydro-1,3-dioxo-1H-isoindole-2,5-diyl)iminocarbonyl-1,4-phenylene-9H-fluoren-9-ylidene-1,4-phenylenecarbonylimino] (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



L19 ANSWER 2 OF 6 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:344276 HCAPLUS Full-text

DN 142:400286

TI Carbazole derivatives used as host material of phosphorescent substance in organic electroluminescent devices

IN Chiu, Yung; Chiao, Chuan; Wang, Chien-Hua; Wang, Li-Tuo; Tuan, Lien; Lei, Kang-Tieh

PA Ching-Hua University, Peop. Rep. China; Beijing Wei-Xin-nuo Science and Technology Co., Ltd.

SO Jpn. Kokai Tokkyo Koho, 37 pp.
CODEN: JKXXAF

DT Patent

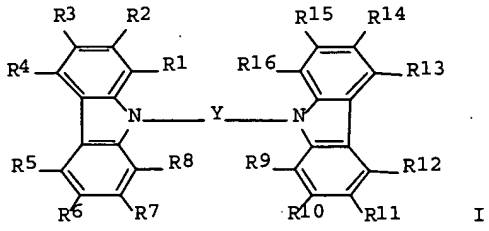
LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP2005104971	A2	20050421	2004JP-0258365	20040906
	CN---1490312	A	20040421	2003CN-0156364	20030905
	US2005127826	A1	20050616	2004US-0933867	20040903
PRAI	2003CN-0156364	A	20030905		

OS MARPAT 142:400286

GI



I

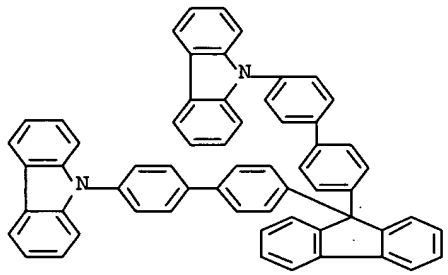
AB Disclosed is a carbazole derivative, suited for use as a host material of a phosphorescent substance in an organic electroluminescent device, characterized in that the glass transition temperature and the lowest excited triplet state energy are 70-220 °C and ≥2.62 eV, resp., and represented by I [Y = linking group containing alkylene, arylene, and spiro structure; and R1-16 = H, alkyl, alkoxy, etc.].

IT **849820-54-8P**

RL: DEV (Device component use); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(carbazole derivs. used as host material of phosphorescent substance in organic electroluminescent devices)

RN 849820-54-8 HCAPLUS

CN 9H-Carbazole, 9,9'-[9H-fluoren-9-ylidenebis([1,1'-biphenyl]-4',4-diyl)]bis- (9CI) (CA INDEX NAME)



L19 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2003:723685 HCAPLUS Full-text

DN 139:252299

TI Diphenylfluorene derivatives and organic electroluminescence devices using them with high luminescence efficiency

IN Ishida, Tsutomu; Shimamura, Takehiko; Tanabe, Yoshimitsu; Totani, Yoshiyuki; Nakatsuka, Masakatsu

PA Mitsui Chemicals Inc., Japan

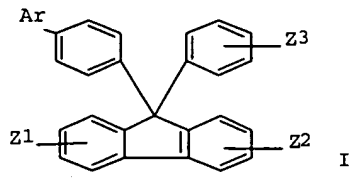
SO Jpn. Kokai Tokkyo Koho, 40 pp.
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP2003261472	A2	20030916	2002JP-0062101	20020307 <--
PRAI	2002JP-0062101		20020307 <--		
OS	MARPAT 139:252299				
GI					



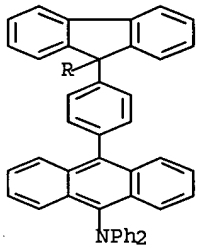
I

AB The electroluminescence devices contain the diphenylfluorene derivs. I (Ar = anthryl; Z1-3 = H, halo, alkyl, alkoxy, aryl, aralkyl) between a pair of electrodes. The electroluminescence devices may further contain luminescent organic metal complexes and triarylamines.

IT **597554-13-7P 597554-20-6P**
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(anthrylphenylphenylfluorene derivs. for organic EL devices with high luminescence efficiency)

RN 597554-13-7 HCAPLUS
CN 9-Anthracenamine, 10-[4-[9-[4'-(diphenylamino)[1,1'-biphenyl]-4-yl]-9H-fluoren-9-yl]phenyl]-N,N-diphenyl- (9CI) (CA INDEX NAME)

PAGE 1-A



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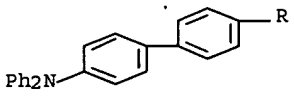
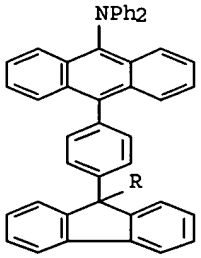


RN 597554-20-6 HCAPLUS
CN 9-Anthracenamine, 10,10'-(9H-fluoren-9-ylidenedi-4,1-phenylene)bis[N,N-diphenyl- (9CI) (CA INDEX NAME)

PAGE 1-A



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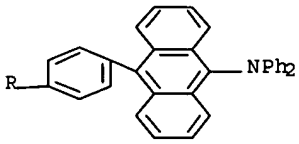
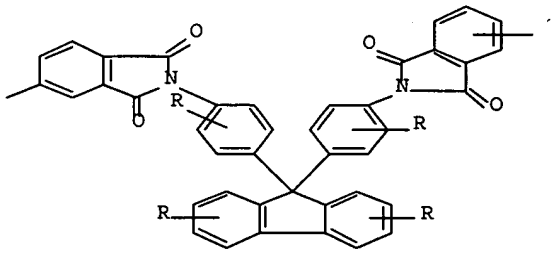


L19 ANSWER 4 OF 6 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1995:403403 HCAPLUS Full-text
DN 123:10262
TI Fluorene-based bisimides for thermoplastic polyimides
IN Inbasekaran, Muthiah N.; Murray, Daniel J.; Mang, Michael N.; Brewbaker, James L.
PA The Dow Chemical Co., USA
SO U.S., 7 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US---5386002	A	19950131	1993US-0161969	19931203 <--
US---5470987	A	19951128	1994US-0315054	19940929 <--
WO---9515350	A1	19950608	1994WO-US12539	19941101 <--
W: CA, JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
PRAI 1993US-0161969	A3	19931203 <--		

GI



I

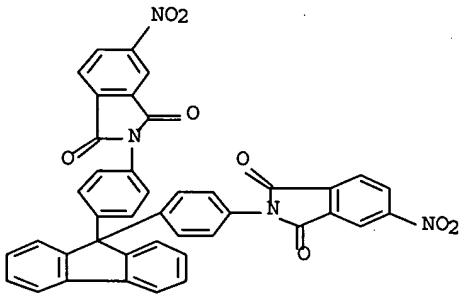
AB Polyetherimides, polyesterimides, poly(ester etherimides) and poly(carbonate imides) which are thermoplastic, polymeric materials contain divalent bisimides I wherein R is

independently in each occurrence hydrogen, alkyl of from 1 to 20 carbons, aryl or aralkyl of from 1 to 20 carbons, halogen or NO2.

IT **164064-12-4P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(fluorene-based bisimides for thermoplastic polyimides)

RN 164064-12-4 HCAPLUS

CN 1H-Isoindole-1,3(2H)-dione, 2,2'-(9H-fluoren-9-ylidenedi-4,1-phenylene)bis[5-nitro- (9CI) (CA INDEX NAME)



L19 ANSWER 5 OF 6 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1983:35047 HCAPLUS Full-text

DN 98:35047

TI Synthesis and characteristics of bisimides. II

AU Varma, Indra K.; Fohlen, George M.; Parker, John A.

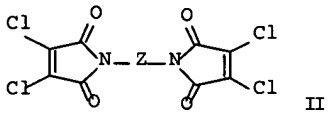
CS Ames Res. Cent., NASA, Moffett Field, CA, 94035, USA

SO Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (1981), 22(1), 22-3
CODEN: ACPPAY; ISSN: 0032-3934

DT Journal

LA English

GI



II

AB Nucleophilic substitution reactions between 9,9-bis(p-aminophenyl)fluorene (I) and 6 different aromatic bis(dichloromaleimides)[II, Z = 1,5-naphthylene, p-C6H4P(O)MeC6H4-p, 1,3,4-oxadiazole-2,5-bis(4-phenylene), phthalide-3,3-bis(4-phenylene), fluorene-9,9-bis(4-phenylene), anthrone-10,10-bis(4-phenylene)] gave condensation polymers which were heat stable to 300° in air or N, with char yields of 50-61% at 800°. The reduced viscosities were 0.13-0.72 dL/g (0.2 g/dL, DMF, 30°). Photocrosslinking of these polymers at 300° for 30 min in air using benzoin as a sensitizer resulted in DMF-insol. resins. The polymers were obtained by polymerizing equimolar amts. of I and II in DMF in the presence of Et3N for 2 h, with precipitation from water. II were synthesized by treating the corresponding aromatic diamines with 2,3-dichloromaleic anhydride [1122-17-4] in AcOH under reflux for 2 h.

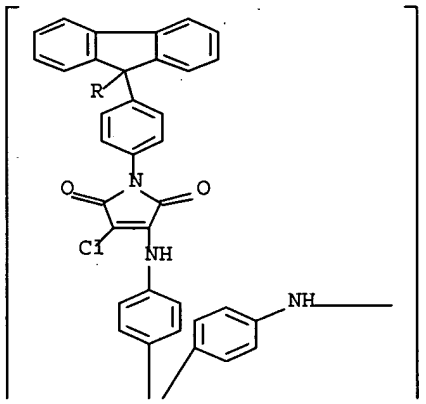
IT **84063-05-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and heat resistance and photochem. crosslinking of)

RN 84063-05-8 HCAPLUS

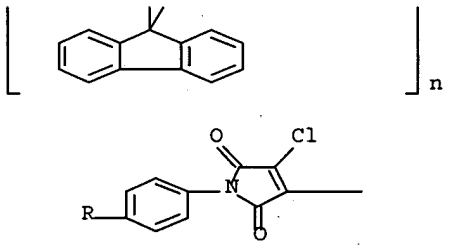
CN Poly[(4-chloro-2,5-dihydro-2,5-dioxo-1H-pyrrole-3,1-diyl)-1,4-phenylene-9H-fluoren-9-ylidene-1,4-phenylene(4-chloro-2,5-dihydro-2,5-dioxo-1H-pyrrole-

1,3-diyl)imino-1,4-phenylene-9H-fluoren-9-ylidene-1,4-phenyleneimino] (9CI) (CA INDEX NAME)

PAGE 1-A



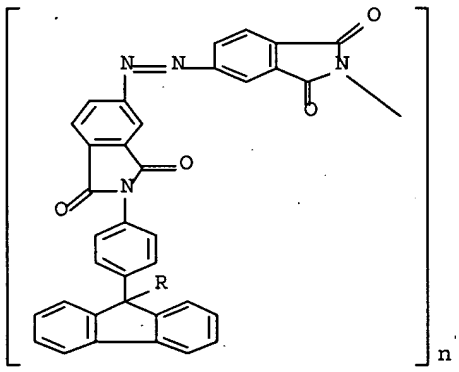
PAGE 2-A



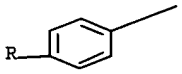
L19 ANSWER 6 OF 6 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1979:6797 HCAPLUS Full-text
DN 90:6797
TI Electron-acceptor properties of aromatic polyimides and their model compounds
AU Pebalk, D. V.; Spasibin, Yu. L.; Kotov, B. V.; Vygodskii, Ya. S.; Pravednikov, A. N.
CS Fiz.-Khim. Inst. im. Karpova, Moscow, USSR
SO Doklady Akademii Nauk SSSR (1978), 242(3), 625-8 [Chem.]
CODEN: DANKAS; ISSN: 0002-3264
DT Journal
LA Russian
AB Polarog. study of the electron-acceptor properties for 13 aromatic tetracarboxylic acid diimides (DI), their corresponding N,N'-diphenyl-substituted diimides (DPDI), and soluble polyimides with 9,9-bis(4'-aminophenyl)fluorene (PI) showed similar half-wave reduction potentials for the DPDI and PI, indicating that the electron-acceptor properties of the PI are determined by the structure of the acid component only. The electron affinities (Ea) for the DI were on the average .apprx.0.1 eV lower than the Ea for DPDI and PI. The higher values for DPDI and PI were attributed to increased polyconjugation through inclusion of Ph radicals in the system.
IT **68628-37-5**
RL: USES (Uses)
(electron acceptor properties of, dianhydride structure in relation to)
RN 68628-37-5 HCAPLUS
CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)azo(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)-1,4-phenylene-9H-fluoren-9-ylidene-1,4-

phenylene] (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



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CA INDEXING COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'USPAT2' ENTERED AT 12:20:20 ON 01 NOV 2006
CA INDEXING COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

=> d bib abs hitrn fhitstr l21 2

L21  ANSWER 2 OF 4  USPATFULL on STN
AN     2004:145284  USPATFULL  Full-text
TI     Novel arylamine derivatives having fluorene skeleton, synthetic
       intermediates thereof, processes of producing those, and organic
       electrolumivescene devices
IN     Nishiyama, Masakazu, Shunan-shi, JAPAN
       Tenma, Hiroaki, Shunan-shi, JAPAN
       Eguchi, Hisao, Shunan-shi, JAPAN
PA     TOSOH CORPORATION (non-U.S. corporation)
PI     US2004110958       A1   20040610
AI     2003US-0663683     A1   20030917 (10)
PRAI   2002JP-0274983      20020920
       2003JP-0004818      20030110
       2003JP-0054070      20030228
       2003JP-0199203      20030718
DT     Utility
FS     APPLICATION
LREP   SUGHRUE MION, PLLC, 2100 PENNSYLVANIA AVENUE, N.W., SUITE 800,
       WASHINGTON, DC, 20037
CLMN   Number of Claims: 29
ECL    Exemplary Claim: 1
DRWN   1 Drawing Page(s)
LN.CNT 1595
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
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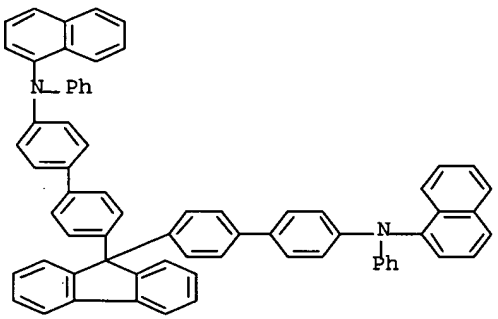
AB Arylamine derivatives that can be utilized as hole transport or hole injection materials of organic electroluminescence devices, electrophotographic reactors, etc., and synthetic intermediates thereof, and processes of producing those. The arylamine derivative is represented by the general formula (1): ##STR1##

wherein R.sup.1 to R.sup.4 each independently represents a hydrogen atom, an alkyl group, an alkoxy group, an aryl group, an aryloxy group, a halogen atom, an amino group, etc.; Ar.sup.1 and Ar.sup.2 each independently represents a substituted or unsubstituted aryl group or hetero-aromatic group, and Ar.sup.1 and Ar.sup.2 may form a nitrogen-containing heterocyclic ring together with the nitrogen atom to which Ar.sup.1 and Ar.sup.2 bond; and Ar.sup.3 represents a substituted or unsubstituted arylene group.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **675201-90-8P 675201-92-0P 675201-93-1P**
675201-95-3P 675201-97-5P 675201-99-7P
675202-01-4P 675202-03-6P
(synthesis of blue fluorescent 9,9-bis[(4-amino)-1,1'-biphenyl]fluorene derivs. for use in organic electroluminescent devices)
IT **675201-90-8P**
(synthesis of blue fluorescent 9,9-bis[(4-amino)-1,1'-biphenyl]fluorene derivs. for use in organic electroluminescent devices)
RN 675201-90-8 USPATFULL
CN 1-Naphthalenamine, N,N'-[9H-fluoren-9-ylidenebis([1,1'-biphenyl]-4',4-diyl)]bis[N-phenyl- (9CI) (CA INDEX NAME)

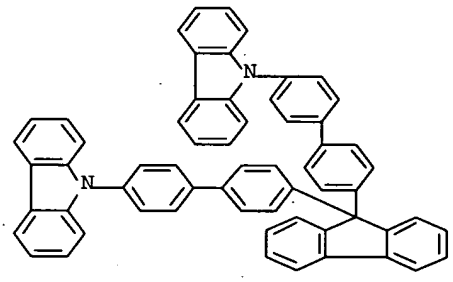


=> d bib abs hitstr l21 1 3 4

L21 ANSWER 1 OF 4 USPATFULL on STN
AN 2005:148925 USPATFULL Full-text
TI Carbazole derivative and its use in electroluminescent devices
IN Qiu, Yong, Beijing, CHINA
Qiao, Juan, Beijing, CHINA
Wang, Jianhua, Beijing, CHINA
Wang, Liduo, Beijing, CHINA
Duan, Lian, Beijing, CHINA
Lei, Gangtie, Beijing, CHINA
PI US2005127826 A1 20050616
AI 2004US-0933867 A1 20040903 (10)
PRAI 2003CN-0156364 20030905
DT Utility
FS APPLICATION
LREP RATNERPRESTIA, P O BOX 980, VALLEY FORGE, PA, 19482-0980, US
CLMN Number of Claims: 22
ECL Exemplary Claim: 1
DRWN 1 Drawing Page(s)

LN.CNT 681
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to a series of carbazole derivatives which are used in organic electroluminescent devices as the phosphorescent host materials of the emissive layers. The carbazole derivatives have glass transition temperature of between 70° C. and 220° C. and triplet energy of 2.62 eV or more. The carbazole derivatives comprise two carbazole groups and alkyl group and/or spiro group inserted between the carbazole group and aromatic group, which is represented by formula 1. The carbazole derivatives according to the present invention are used as host materials for the triplet emissive dyes and they have high energy and stability. They can also reduce the converse energy transfer from the dye molecules to the host molecules and improve the luminance and efficiency of the OLEDs, especially the efficiency and lifetime of the blue triplet OLEDs. ##STR1##

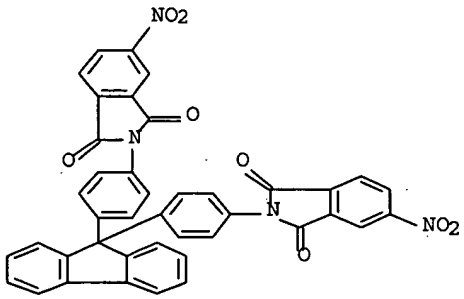
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **849820-54-8P**
(carbazole derivs. used as host material of phosphorescent substance in organic electroluminescent devices)
RN 849820-54-8 USPATFULL
CN 9H-Carbazole, 9,9'-[9H-fluoren-9-ylidenebis([1,1'-biphenyl]-4',4-diyl)]bis- (9CI) (CA INDEX NAME)



L21 ANSWER 3 OF 4 USPATFULL on STN
AN 95:105976 USPATFULL Full-text
TI Bisimide monomers
IN Inbasekaran, Muthiah N., Midland, MI, United States
PA The Dow Chemical Company, Midland, MI, United States (U.S. corporation)
PI US---5470987 19951128
AI 1994US-0315054 19940929 (8)
RLI Division of Ser. No. 1993US-0161969, filed on 3 Dec 1993, now patented, Pat. No. US---5386002
DT Utility
FS Granted
EXNAM Primary Examiner: Haley, Jacqueline
LREP Treangen, J. B.
CLMN Number of Claims: 6
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 287
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Monomeric bisimides corresponding to the formula: ##STR1## wherein R is independently in each occurrence hydrogen, alkyl of from 1 to 20 carbons, aralkyl of from 1 to 20 carbons, halogen, or NO.sub.2 ; X' is F, Cl, OH, or NO.sub.2. These bisimides are useful in the production of various thermoplastic, polymeric materials such as polyetherimides, polyesterimides, and poly(carbonate imides).

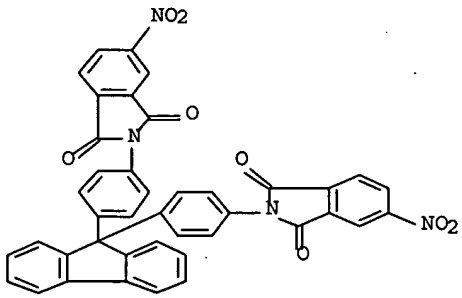
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **164064-12-4P**

(fluorene-based bisimides for thermoplastic polyimides)
RN 164064-12-4 USPATFULL
CN 1H-Isoindole-1,3(2H)-dione, 2,2'-(9H-fluoren-9-ylidenedi-4,1-phenylene)bis[5-nitro- (9CI) (CA INDEX NAME)



L21 ANSWER 4 OF 4 USPATFULL on STN
AN 95:9792 USPATFULL Full-text
TI Fluorene based bisimides and thermoplastic polymers thereof
IN Inbasekaran, Muthiah N., Midland, MI, United States
Murray, Daniel J., Midland, MI, United States
Mang, Michael N., Midland, MI, United States
Brewbaker, James L., Midland, MI, United States
PA The Dow Chemical Company, Midland, MI, United States (U.S. corporation)
PI US---5386002 19950131
AI 1993US-0161969 19931203 (8)
DT Utility
FS Granted
EXNAM Primary Examiner: Foelak, Morton; Assistant Examiner: Hampton-Hightower, P.
LREP O'Keefe, Robert M.
CLMN Number of Claims: 28
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 513
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Polyetherimides, polyesterimides, poly(ester etherimides) and poly(carbonate imides) which are thermoplastic, polymeric materials contain divalent bisimides of formula ##STR1## wherein R is independently in each occurrence hydrogen, alkyl of from 1 to 20 carbons, aryl or aralkyl of from 1 to 20 carbons, halogen or NO.sub.2. Novel monomeric bisimides corresponding to the above formula are also disclosed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **164064-12-4P**
(fluorene-based bisimides for thermoplastic polyimides)
RN 164064-12-4 USPATFULL
CN 1H-Isoindole-1,3(2H)-dione, 2,2'-(9H-fluoren-9-ylidenedi-4,1-phenylene)bis[5-nitro- (9CI) (CA INDEX NAME)

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L3            30 SEA L2
L4               STR

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                 E TENMA H/AU
L7            37 E5
                 E TENMA N/AU
                 E HIROAKI T/AU
                 E HIROAKI N/AU
                 E EGUCHI H/AU
L8           160 E3,E57
                 E EGUCHI N/AU
L9            10 E5
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L18            4 L17 AND (PY<=2002 OR AY<=2002 OR PRY<=2002)
L19            6 L17-18
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